

**AMENDMENTS TO THE CLAIMS**

1-7. (Cancelled)

8. (Currently Amended) ~~The method of claim 7, further comprising:~~

A method, implemented in a data processing system, for generating task-specific code for pattern recognition, the method comprising:

receiving task-specific input system data of a pattern recognition system;

generating task-specific code for the pattern recognition system based on the task-specific input system data, wherein the task-specific code includes computer language suitable for compilation;

compiling the task-specific code to form a decoder program;

profiling the decoder program to form a profile; and

determining whether the decoder program is optimized.

9. (Original) The method of claim 8, further comprising:

responsive to the decoder program not being optimized, automatically modifying and recompiling the decoder program based on the profile.

10-14. (Cancelled)

15. (Currently Amended) ~~The computer program product of claim 14, further comprising:~~

A computer program product, stored in a recordable type medium, for generating task-specific code for pattern recognition, the computer program product comprising:

instructions for receiving task-specific input system data of a pattern recognition system;

instructions for generating task-specific code for pattern recognition system based on the task-specific input system data, wherein the task specific code includes computer language suitable for compilation;

instructions for compiling the task-specific code to form a decoder program;

instructions for profiling the decoder program to form a profile; and  
instructions for determining whether the decoder program is optimized.

16. (Original) The computer program product of claim 15, further comprising:  
instructions, responsive to the decoder program not being optimized, for automatically  
modifying and recompiling the decoder program based on the profile.

17-23. (Cancelled)

24. (Currently Amended) ~~The apparatus of claim 21, wherein the processor further executes  
instructions to:~~

An apparatus for generating task-specific code for pattern recognition, the apparatus  
comprising:

a bus;

a memory connected to the bus, wherein the memory contains computer readable  
instructions; and

a processor connected to the bus, wherein the processor executes the computer readable  
instructions to:

receive task-specific input system data of a pattern recognition system;

generate task-specific code for the pattern recognition system based on the task-  
specific input system data, wherein the task-specific code includes computer language  
suitable for compilation;

compile the task-specific code to form a decoder program for the pattern  
recognition system;

profile the decoder program to form a profile; and

determine whether the decoder program is optimized.